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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/829,468  
Filing Date: April 21, 2004  
Appellant(s): MOTYKA ET AL.

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Gary P. Oakeson  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 06/09/08 appealing from the Office action mailed 01/24/08.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6426424	Ashmead et al.	07-2002
4725427	Ashmead et al.	02-1988

Izumi et al. Production and Utilization of Amino Acids; *Angewandte Chemie International Ed.* 1978, 17, 176-183.

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 34-36, 41-45 and 50-53 remain/are rejected under 35 U.S.C. 102(b) as being anticipated by Hsu (US 5,504,055).

Hsu discloses metal amino acid chelates that can deliver high levels of desirable metal ions to plants and human beings (Abstract; Column 1, lines 44-50). Hsu distinctly claims iron, which embraces all oxidation states of iron, copper, zinc, magnesium and calcium as metal ions and glycine as the amino acid (Column 11, lines 45-52; Column 12; lines 12-14 and 18-24). The mole ratio of metal ion to acid is about 1:2 (Column 2, lines 35-36). Hsu disclose a composition comprising ferrous iron carbonate/citric acid/glycine to produce an amino acid chelate thus anticipating the addition of citric acid (instant claims 17-19, 27-28 and 50-51) (Column 3, lines 63-67 and column 4, lines 1-14). Hsu provides methods to synthesize the metal amino acid

chelate (instant claims 34-36) (Column 3, liens 63-67 and Column 4, lines 1-14, for example).

The Examiner interprets the selection of specific reagents by Hsu to produce the metal amino acid chelate as reading upon instant claims 35 and 36. Hsu administered the iron/citrate/glycine chelate to tomato plants (instant claim 43-45) (Column 7, lines 56-67 and column 8, lines 1-13).

The Examiner interprets the selection of specific reagents by Hsu to produce the metal amino acid chelate for administration to tomato plants as reading upon instant claims 41-45 and 50-51.

***Claim Rejections - 35 USC § 102***

Claims 34-36, 41-45, 52 and 53 remain/are rejected under 35 U.S.C. 102(b) as being anticipated by Ashmead et al. (US 6,426,424).

Ashmead et al. disclose compositions and methods of preparing amino acid chelates (Abstract). The amino acid ligand to metal molar ratio is from about 1:1 to 4:1 (Instant claim 1) (Column 5, lines 31-35 and column 10, lines 24-25). Ashmead et al. disclose iron, copper zinc manganese, cobalt, magnesium, chromium, and molybdenum as metal ions and provide examples of a ferrous glycine chelate, zinc glycine chelate, manganese glycine chelate, magnesium glycine chelate, copper glycine chelate as well as mixed metal/amino acid chelates in the ratios of amino acid ligand to metal ion of 2:1 to 3:1 (instant claims 2, 3 and 5)(Column 8, lines 8-25 and 48-67; column 9, lines 5-67 and column 10, lines 1-16). Ashmead et al. produced a metal amino acid chelate and added to the composition maltodextrin, corn-starch and cellulose (instant claims 17, 20-22, 26-28 and 34-36 and 41-42) (Column 9, lines 29-32). Applicant defines in the specification that maltodextrins can be both fillers and flow control agents (Instant specification page 14, lines 19-20). Ashmead et al. disclose that the amino acid chelates can be administered to plants by dissolution on leaves or as a soil treatment thus anticipating instant

claim 43 (Column 7, lines 53-63). Obtaining metal ions and amino acids to make the composition reads upon instant claims 44 and 45.

***Claim Rejections - 35 USC § 102***

Claims 43-45, 50-51 and 53 remain/are rejected under 35 U.S.C. 102(b) as being anticipated by Ashmead et al. (US 4,725,427).

Ashmead et al. disclose a vitamin and mineral composition comprising amino acid metal chelate with an amino acid ligand to metal ratio of at least 2:1 and a method of preparing the vitamin and mineral composition (Column 5, line 61; column 11, lines 1-23 and lines 53-59; column 12, lines 1-36). The amino acid chelated minerals are selected from the group consisting of calcium, magnesium, iron, zinc, copper and manganese (Column 12, lines 18-22). Glycine is disclosed as a amino acid ligand (Column 5, lines 64-67).

A powdered mixture of water soluble vitamins was prepared by blending calcium ascorbate folic acid thiamine mononitrate, sodium salt of riboflavin-5-phosphate, niacinamide pyridoxine HCl, biotin and calcium pantothenate (Column 9, lines 15-21). The powdered mixture was then blended with powdered lactose. The Examiner interprets powdered lactose to be a maltodextrin and the Applicant defines in the specification that maltodextrins can be both fillers and flow control agents (Instant specification page 14, lines 19-20). In a separate container, ethanol, propylene glycol, vegetable oil, vitamin A palmitate, vitamin D, vitamin E and cyanocobalamin were mixed until dissolution (Column 9, lines 24-34). The water-soluble vitamins were then added to the oil soluble vitamins and blended (Column 9, lines 35-43). To this mixture was added amino acid metal chelates and potassium amino acid complex (Column

9, lines 44-51). After blending, citric acid, potassium bicarbonate and sodium bicarbonate, lime and lemon flavoring and aspartame sweetener were added and completely mixed and ultimately granulated (Column 9, lines 52-67). The granules dissolved in water to provide a pleasant tasting flavored drink (instant claims 43-45, 50 and 51) (Column 2, lines 35-40 and column 10, lines 1-5). Ashmead et al. claim the method of preparing the composition (Column 11, lines 53-59 and column 12, lines 1-36). The reference of Ashmead et al. is deemed to meet the limitations of the instant claims 43-45, 50-51 and 53.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 34, 37-40, 43 and 46-49 remain/are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US 5,504,055) in view of Izumi et al. (Angew. Chem. Int. Ed. Engl. 1978, 17, 76-183).

**Determination of the scope and content of the prior art**

**(MPEP 2141.01)**

The reference of Hsu et al. is discussed in detail above and that discussion is hereby incorporated by reference.

Izumi et al. teach multiple methods of producing amino acids including enzymatic, fermentation, extraction (protein hydrolysis) and synthetic methods (Page 176, Table 1; page 177, 2.1 Extraction Method; 2.2 Fermentation Method; page 178, 2.3 Enzymatic method; and page 179, Synthetic Method).

**Ascertainment of the difference between the prior art and the claims**

**(MPEP 2141.02)**

Hsu et al. do not expressly disclose a method as in claims 34 and 43 wherein the naturally occurring amino acid used to prepare the amino acid chelates is prepared by: 1) a method other than protein hydrolysis; 2) synthetically; 3) fermentation; and 4) protein hydrolysis and wherein the protein used in the hydrolysis is non-GMO.

**Finding of prima facie obviousness**

**Rational and Motivation (MPEP 2142-2143)**

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to obtain amino acids via one of the methods suggested by Izumi et al. for the composition of Hsu et al. to produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because Izumi et al. state these methods are the recent advances in industrial production of amino acids (Page 176, middle of right column).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of

ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the combined teachings of the cited references.

#### **(10) Response to Argument**

Appellant asserts that none of the cited references discusses or discloses non-GMO metal amino acid chelates and that the Examiner has not met his burden with respect to any of the claims on appeal. It is the position of the Examiner that the metals and amino acids are inherently/intrinsically not from a genetically modified organisms. Methods of making metal amino acids are already taught in the art and those methods inherently/intrinsically cover metal and amino acid sources from non-genetically modified organisms. Appellant appears to be applying a label of non-genetically modified organism to the sources as a means to instill novelty to a well known process. **There is nothing new here.** An analogy would be if Appellant were claiming a method of making Plaster of Paris but the source of the plaster was from non-genetically modified organisms. It is still Plaster of Paris. **If the Examiner were to agree with Appellant then anyone could continue patenting any method indefinitely provided that they added the source of the ingredients was from a non-genetically modified organism to the method.**

Appellant asserts that there is nothing to suggest that the methods described in the cited references would direct one of ordinary skill in the art to specifically choose a metal or amino acid from a non-genetically modified organism. There is also no teaching in the art that says one must choose a metal or amino acid from a genetically modified organism. There is also no

affirmative step in the art that says one must select the metal or amino acid from genetically modified organism as well. Simply stated the source is either from a genetically modified organism or it is not from a genetically modified organism and the art does not direct one to select metals and amino acids from genetically modified organisms.

Appellant makes a confusing remark on page 12 bottom of the page: "In fact, if the sources are non-GMO, no determination would need to be made, which further supports patentability of the present method claims." Applicant is correct that a determination of non-GMO source is superfluous and that would seem to undermine Appellant's position rather than support it.

The Examiner has considered the art as a whole and can only conclude that methods of making metal amino acid chelates that are not derived from genetically modified organisms are inherent/intrinsic to the methods already taught in the art. There is nothing new or unobvious about the instant application.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616

**Conferees:**

/Ernst V Arnold/

Examiner, Art Unit 1616

/SREENI PADMANABHAN/

Supervisory Patent Examiner, Art Unit 1617